

Remarks/Arguments:

Applicants affirm the election of claim 1-47 and now cancel the non-elected claims 48-50 without prejudice and reserve the right to prosecute these claims in a divisional application.

Claims 1-47 are pending. Claims 1-47 stand rejected. By this Amendment, applicants have added claims 51 and 52. Accordingly, by this Amendment claims 1-47, 51 and 52 are presented for consideration.

Rejections Under 35 U.S.C. § 102

The Office Action sets forth at page 3, "Claims 1, 2, 5-6, 8-12, 17, 20, 21, 25-26, 31 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 19814575..."

Applicants respectfully traverse this rejection for the reasons set forth below.

Applicants' invention, as recited in claim 1, includes features not disclosed or suggested by DE 19814175, namely:

... at least one sensor having a predetermined shape and in line with the fiber optic ring, the at least one sensor coupled to the substrate and responsive to the strain induced into the substrate ...

... a processor coupled to the detector for determining a level of the strain induced into the substrate based on a rate of decay of the radiation in the passive fiber optic ring. (Emphasis added)

These features are described in applicants' specification, for example, at page 20, line 7 - page 23, line 9.

The Office relies upon DE 19814575 as "[disclosing] an optical sensor that determines at least one physical and chemical parameter in a sample gas or liquid." DE 19814575 does not disclose or suggest, however, i) at least one sensor having a predetermined shape and in line with the fiber optic ring, the at least one sensor coupled to the substrate and responsive to the strain induced into the substrate and ii) a processor coupled to the detector for determining the level of the strain induced into the substrate based on a rate of decay of the radiation in the passive fiber optic ring.

It is because applicants have included the features of i) at least one sensor having a predetermined shape and in line with the fiber optic ring, the at least one sensor coupled to the substrate and responsive to the strain induced into the substrate and ii) a processor

coupled to the detector for determining a level of the strain induced into the substrate based on a rate of decay of the radiation in the passive fiber optic ring that applicants are able to provide for the measurement of strain induced in material that is not subject to the insensitivities inherent in conventional strain measuring devices.

DE 19814575 does not provide this advantage because DE 19814575 does not address how to use fiber optics as a means to measure strain nor is there any indication in this reference that the inventors were aware of the problems of the prior art strain measurement systems. Because DE 19814575 was not aware of the problems associated with conventional strain measuring systems it cannot be said that DE 19814575 provides a system or method to solve those problems.

Applicants respectfully submit, therefore, that the rejection of claim 1 as being anticipated by DE 19814575 is improper, should be withdrawn, and the claim allowed.

Although not identical, claim 42 recites features similar to those of claim 1 and, thus, is likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

Claims 2, 5-6, 8-12, 17, 20, 21, 25-26 and 31 depend either directly or indirectly on claim 1 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

The Office Action sets forth at page 4, "claims 1-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Lerber et al (US 2002/0092977)." Applicants respectfully traverse this rejection for the reasons set forth below.

Applicants' invention, as recited in claim 1, includes features not disclosed or suggested by Lerber et al., namely:

... at least one sensor having a predetermined shape and in line with the fiber optic ring, the at least one sensor coupled to the substrate and responsive to the strain induced into the substrate ...

... a processor coupled to the detector for determining a level of the strain induced into the substrate based on a rate of decay of the radiation in the passive fiber optic ring. (Emphasis added)

These features are described in applicants' specification, for example, at page 20, line 7 - page 23, line 9.

Lerber is relied upon as “[disclosing] a method and apparatus for measuring at least one physical parameter using an optical resonator.” Applicants note that the lengthy recitation of what the Office interprets Lerber et al. to disclose does not include, however, i) at least one sensor having a predetermined shape and in line with the fiber optic ring, the at least one sensor coupled to the substrate and responsive to the strain induced into the substrate and ii) a processor coupled to the detector for determining a level of the strain induced into the substrate based on a rate of decay of the radiation in the passive fiber optic ring.

Applicants respectfully submit, therefore, that because Lerber fails to disclose each and every feature of applicants’ claimed invention, the rejection of claim 1 as being anticipated by Lerber et al. is improper, should be withdrawn, and the claim allowed.

Although not identical, claim 42 recites features similar to those of claim 1 and, thus, likewise not subject to rejection for the reasons set forth above with respect to claim 1.

Claims 2-41 and 43-47 depend, either directly or indirectly, on claim 1 or 42 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to these claims.

Further, Applicants submit Declarations of the Inventors (Exhibit A) and an employee of the assignee (Exhibit B) that show that applicants’ invention predates the effective filing date of Lerber. Accordingly, applicants respectfully submit that the rejection of the claims 1-47 as being anticipated by Lerber is improper, should be withdrawn, and the claims allowed.

The Office Action at page 7, sets forth “Claims 1-47 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-56 of copending Application No. 10/017,367.” Applicants wish to advise the Office that the ‘367 application issued as U.S. Letters Patent No. 7,046,362 on May 16, 2006.

Although the applicants respectfully disagree with the Office’s conclusion of obviousness-type double patenting, in order to expedite prosecution of the present application applicants submit herewith a Terminal Disclaimer, thus obviating this rejection.

The Office Action at page 8, sets forth “Claims 1-47 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-50 of copending Application No. 10/157,400.” Applicants respectfully traverse this rejection for the reasons set forth below.

Claims 1-47 of the '400 application are directed to detecting a level of a trace species in a sample liquid or gas. In sharp contrast, the pending claims of the instant application are directed to determining strain induced into a substrate to which a sensor is coupled. The Office has not provided any reference supporting the conclusion that fiber based strain measurement is obvious over measurement of trace species in a sample liquid or gas.

Applicants respectfully request, therefore, that the rejection of claims 1-47 under the judicially created doctrine of obviousness-type double patenting be withdrawn and the claims allowed.

In view of the remarks set forth above, Applicants submit that the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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JLE/kpc

Enclosures: Exhibits A and B - Declarations Under 37 CFR § 1.131
Terminal Disclaimer

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The Director is hereby authorized to charge or credit Deposit Account No. **18-0350** for any additional fees, or any underpayment or credit for overpayment in connection herewith.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 28, 2006.

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